



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NV

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,850	07/08/2003	Christopher Jones	1391-41700	9134
23505	7590	11/04/2004		EXAMINER
CONLEY ROSE, P.C.				FITZGERALD, JOHN P
P. O. BOX 3267				
HOUSTON, TX 77253-3267			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,850	JONES ET AL.	
Examiner	Art Unit		
John P Fitzgerald	2856		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 October 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 5-7,15,16 and 20 is/are allowed.

6) Claim(s) 1-4,8-13 and 17-19 is/are rejected.

7) Claim(s) 14 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 07 August 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: It appears that the Applicant has not deleted "11" with the proper cross-through, thus leaving it within the claim. For the purposes of examination, it will be assumed that claim 14 is indeed dependent upon claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4, 10, 11, 13 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Streigler and US 6,423,802 to Miller et al. Streigler discloses a method for measuring the infiltration of a coring fluid into a core sample taken from a formation including the steps of providing a coring fluid containing an oil having a different hydrocarbon analysis (hydrocarbons with eight to thirty-five carbon atoms) than that of the formation oil/fluid; utilizing the coring fluid in conjunction with a coring means (i.e. coring barrel or sidewall coring device) to generate a core sample; determining/measuring the concentration of coring fluid that has infiltrated the core sample via chromatographic or mass spectrophotometry methods and performing a relative quantity/percentage comparison analysis of the two different hydrocarbon materials in the formation oil, coring/drilling fluid and to that of the sample oil which is taken from the core sample by displacing the sample oil via centrifuging (as recited in claims 4 and 13) the core sample or by displacing the sample oil by solvent extraction or fluid displacement of the core (as recited in claims 10 and 19). See Fig. 1 and

Tables 1 and 2 in col. 4. However, Striegler fails to disclose the employment of a drilling fluid containing cesium and performing the comparison analysis based on the concentration of cesium infiltrated into the core sample. US 6,423,802 to Miller et al. teach the use of cesium based coring/drilling fluids (note: cesium based includes cesium salts, formates, formic acids such as CsCO₂H). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a coring/drilling fluid containing cesium, and subsequently perform the relative concentration/quantity analysis disclosed by Striegler to determine the degree of infiltration of the coring/drilling fluid containing cesium into the core sample, since cesium based coring/drilling fluids provide a high temperature viscosity as well as suitable density for drilling/coring (Miller et al. col. 2, lines 1-9).

4. Claims 3 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and further in view of Applicant's disclosed Prior Art document "*A Beginners Guide to ICP-MS Part I/Spectroscopy Tutorial*" by Thomas. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously, including the employment of a mass spectrometer. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. do not expressly disclose the employment of a ICP-MS spectrometer to determine the concentration of cesium present in the core sample. Thomas teaches that an ICP-MS is a class of spectrometer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a ICP-MS spectrometer to analyze the concentration of a cesium constituent, as taught by Thomas, thus providing a rapid multielement capabilities combined with superb detection limits (Thomas,

page 1, col. 1). Furthermore, it is considered an obvious matter of design choice to employ an ICP-MS to determine the relative concentrations of elements with a core sample, since applicant has not disclosed that an ICP-MS spectrometer solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any type of mass spectrometer.

5. Claims 8 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and further in view of US 6,177,396 to Clapperton et al. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously. Striegler further discloses that drilling/coring fluids are comprised of various elements, chemicals and solids (i.e. weighting agents) to control the formation pressures. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. do not expressly disclose the use of cesium as a weight agent in coring fluid. Clapperton et al. teach that various salts are employed as weighting agents, specifically, cesium, sodium and calcium salts have been tested and used as drilling/coring fluids due to their relatively high density (Clapperton et al.: col. 14, line 61 to col. 15, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a cesium salt as a weighting agent within drilling/coring fluids, or any type of suitable salt compound as a weighting agent, and is considered to be an obvious design choice well within the purview of one of ordinary skill in the art.

6. Claims 9 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,174,629 to Striegler and US 6,423,802 to Miller et al. as applied to claims 1 and 11 above, and

further in view of US 6,283,228 to Collee et al. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. disclose a method for measuring the infiltration of a coring fluid into a core sample having all of the elements stated previously. US 4,174,629 to Striegler and US 6,423,802 to Miller et al. do not expressly disclose a method for measuring the infiltration of a coring fluid into a core sample further including a device for reducing the amount of coring fluid that infiltrates the core sample. Collee et al. teach a coring method for protecting the integrity of a core sample obtained with a drilling/coring fluid and further encapsulating the core sample with an encapsulating material that is separate from the drilling/coring fluid, as well as other methods of reducing infiltration into the core sample such as pressure coring and sponge coring. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a device for reducing the amount of coring fluid that infiltrates the core sample, as taught by Collee et al., modifying the method step of obtaining a core sample disclosed by Striegler and Miller et al., for protecting the chemical integrity of the core sample during transport from the subterranean formation to the surface, which aids in the subsequent chemical analysis of the core sample.

Response to Arguments

7. Applicant's arguments filed 27 October 2004 have been fully considered but they are not persuasive. Applicant argues that the Striegler reference teaches away from the use of non-hydrocarbon tracers stating that the Examiner employed "hindsight obviousness" and employing "Applicant's own teachings" in assessing the obviousness of the instant invention in combination with the Miller et al. reference. The Examiner respectfully disagrees with these assertions.

8. In response to applicant's argument that Striegler teaches away from the possible combination with Miller et al., the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant case, the Striegler reference is employing known technology/methods existing over twenty years past. The employment new technology of tracers, such as those taught by Miller et al. are clearly applicable and employable in combination with the Striegler reference, and as such, well within the purview of one having ordinary skill in the art. Furthermore, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Miller et al. clearly teaches that cesium based coring/drilling fluids provide a high temperature viscosity as well as suitable density for drilling/coring (Miller et al. col. 2, lines 1-9), thus providing a proper and valid motivation to one of ordinary skill in the art.

9. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Allowable Subject Matter

10. Claims 5-7, 15, 16 and 20 are allowed over the Prior Art of record.
11. Claim 14 is objected to, due to a minor error.
12. The following is a statement of reasons for the indication of allowable subject matter:
The primary reasons for the allowance of the claims is the inclusion of the limitation of specific amounts (25 ppb or ranges up to 250 ppb) of cesium concentration within the coring fluid. The Prior Art fails to give any teachings or specific information regarding appropriate concentrations of cesium.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harris, Minh et al. and Nguyen et al. all contain teachings relevant to the instant invention.
14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF
10/27/2004

Hezron R. Williams
HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800